6BC5

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SHARP-CUTOFF PENTODE

MINIATURE TYPE

Useful at Frequencies up to 400 Mc

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:
- Voltage . . . . 6.3 . . . . ac or dc volts
- Current . . . . 0.3 . . . . amp

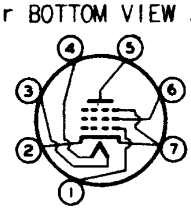
Direct Interelectrode Capacitances: ←

	Without External Shield	With External Shield°	
Pentode Connection:			
Grid No.1 to plate . . .	0.030 max.	0.020 max.	μμf
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater	6.5	6.6	μμf
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater	1.8	2.6	μμf
Triode Connection, Grid No.2 connected to plate:			
Grid No.1 to plate and grid No.2.	2.5	2.5	μμf
Grid No.1 to cathode & grid No.3 & internal shield, and heater . .	3.9	4.0	μμf
Plate and grid No.2 to cathode & grid No.3 & internal shield, and heater . .	3.0	4.3	μμf

Mechanical:

Mounting Position . . . . Any
Maximum Overall Length . . . . 2-1/8"
Maximum Seated Length . . . . 1-7/8"
Length, Base Seat to Bulb Top (Excluding tip) . . 1-1/2" ± 3/32"
Maximum Diameter . . . . 3/4"
Bulb T-5-1/2
Base . . . . . . Small-Button Miniature 7-Pin (JETEC No.E7-1) ←
Basing Designation for BOTTOM VIEW 7BD

Pin 1 - Grid No.1
Pin 2 - Cathode, Grid No.3, Internal Shield
Pin 3 - Heater



Pin 4 - Heater
Pin 5 - Plate
Pin 6 - Grid No.2
Pin 7 - Same as Pin 2

° With external shield JETEC No.316 connected to cathode.

← Indicates a change.

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AMPLIFIER - Class A_1

Maximum Ratings, *Design-Center Values:*

PLATE VOLTAGE	300 max.	volts
GRID-No.2 (SCREEN) SUPPLY VOLTAGE	300 max.	volts
→ GRID-No.2 VOLTAGE	*See Grid-No.2 Input Rating Chart at front of Receiving Tube Section*	
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive bias value	0 max.	volts
PLATE DISSIPATION	2 max.	watts
→ GRID-No.2 INPUT:		
For grid-No.2 voltages up to 150 volts	0.5 max.	watt
For grid-No.2 voltages between 150 and 300 volts	*See Grid-No.2 Input Rating Chart at front of Receiving Tube Section*	
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	90 max.	volts
Heater positive with respect to cathode	90 max.	volts

Typical Operation and Characteristics:

Plate Voltage	100	125	250	volts
Grid-No.2 Voltage	100	125	150	volts
Cathode-Bias Resistor	180	100	180	ohms
Plate Resistance (Approx.)	0.6	0.5	0.8	megohm
Transconductance	4900	6100	5700	µmhos
Grid-No.1 Voltage (Approx.) for plate current of 10 µamp	-5	-6	-8	volts
Plate Current	4.7	8	7.5	ma
Grid-No.2 Current	1.4	2.4	2.1	ma

AMPLIFIER - Class A_1

Triode Connection - Grid No.2 Connected to Plate

Maximum Ratings, *Design-Center Values:*

PLATE VOLTAGE	300 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive bias value	0 max.	volts
PLATE & GRID-No.2 DISSIPATION (TOTAL)	2.5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	90 max.	volts
Heater positive with respect to cathode	90 max.	volts

Typical Operation and Characteristics:

Plate Voltage	180	250	volts
Cathode-Bias Resistor	330	820	ohms
Amplification Factor	42	40	
Plate Resistance (Approx.)	6000	9000	ohms
Transconductance	6000	4400	µmhos
Plate & Grid-No.2 Current (Total)	8	6	ma

→ Indicates a change.

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY